

NOTES ON THE DISTRIBUTION AND IDENTITY OF
TIPHIA INTRUDENS SMITH (HYMENOPTERA:
TIPHIIDAE)

G.R. BROWN

Museum and Art Gallery of the Northern Territory, GPO Box 4646, Darwin NT, 0801

Abstract

Specimens of *Tiphia intrudens* Smith (= *T. i. brevior* Turner, syn. nov.) ranging from India to south-eastern Queensland were examined. Although fore wing venation showed some variation in the female, no evidence of geographical variation was found and the use of subspecific names cannot be justified. This species, within Australia, is now known to range from Darwin to Brisbane.

Introduction

The genus *Tiphia* Fabricius is represented in Australia by a single species, *Tiphia intrudens* Smith. This species was originally described from Mysol (now Misool) Island, Indonesia, and was considered to range from India to north Queensland (Bingham 1897, Turner 1908), although no mention of this species was made by Allen (1975) in his monograph of the Indian subcontinent's species.

Turner (1908) placed Australian specimens as *T. intrudens brevior* Turner on the basis of a shorter propodeum in the female and paler wings in both sexes.

Abbreviations: ANIC, Australian National Insect Collection, CSIRO, Canberra; MV, Museum of Victoria, Melbourne; NHM, Natural History Museum, London; OUM, Oxford University Museum, Oxford; QDPI, Queensland Department of Primary Industries, Brisbane; QM, Queensland Museum, Brisbane; UQIC, University of Queensland Insect Collection, Brisbane.

Tiphia intrudens Smith
(Figs 1-7)

Tiphia intrudens Smith, 1863: 25; Bingham, 1897: 61; Allen and Jaynes, 1930: 103.

Tiphia intrudens brevior Turner, 1908: 123; Illingworth 1921:39. Syn. nov.

Tiphia (Tiphia) intrudens: Allen, 1969: 375.

Types. Tiphia intrudens intrudens: Lectotype ♀, Mysol, OUM. Paralectotypes: 1 ♂, 1 ♀, same data as lectotype, NHM.

Tiphia intrudens brevior: Syntypes 8 ♂♂, 5 ♀♀, Mackay, i.1893 to xii.1900, NHM; 1 ♂, Kuranda, xii.1901, NHM.

Material examined - Paralectotypes of *T. intrudens intrudens*, syntypes of *T. intrudens brevior* and other specimens as follows: INDIA: 1 ♂, Shillong, Assam, vi.1903, R. Turner, NHM; 1 ♂, Naga Hills, Bingham, NHM. BURMA: 1 ♂, Rangoon district, vii.1887, Bingham, NHM; 1 ♂, Tenasserim, Ataran Valley, Bingham, NHM; 1 ♂, Shwegyia, ix.1897, Bingham, NHM; 1 ♀, Goteik Gorge,

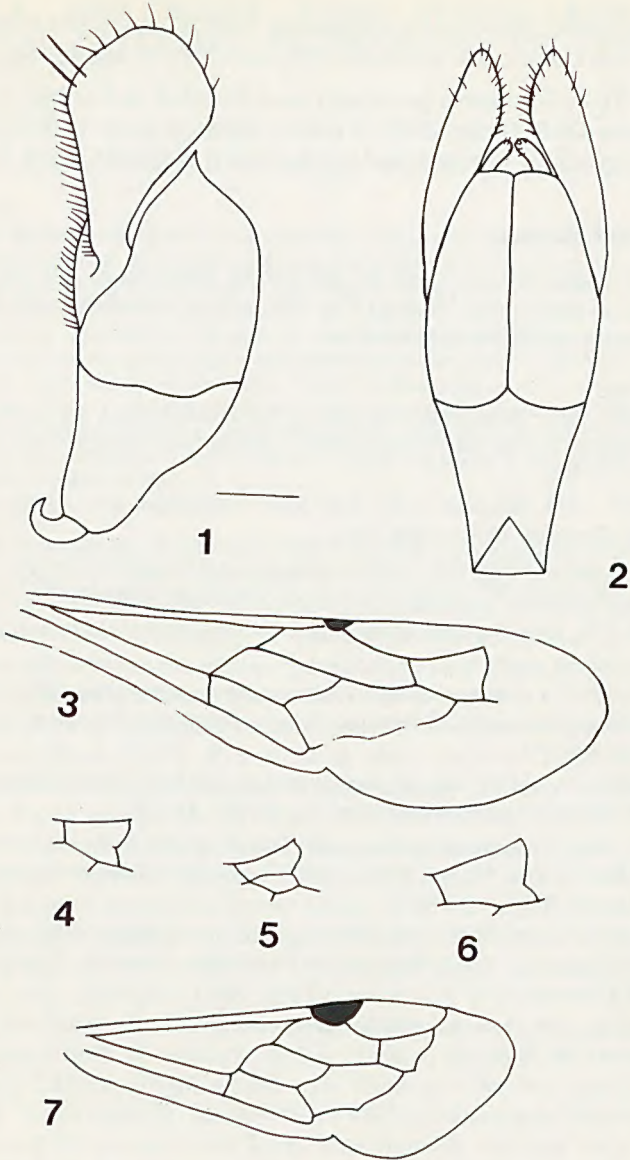
26.vii.1900, Bingham, NHM; 1 ♂, May Myo, 2,000 ft (610 m), 5.ix.1898, Bingham, NHM. INDONESIA: 1 ♂, 1 ♀, Mysol, NHM. PAPUA NEW GUINEA: 1 ♂, Ishurava, 3,000 ft (914 m), vii.1933, L.E. Cheesman, NHM. NORTHERN TERRITORY: 1 ♀, Port Darwin, R.C.L. Perkins, NHM. QUEENSLAND: 1 ♂, north Queensland, R.C.L. Perkins, NHM; 1 ♂, Iron Ra., 1-9.vi.1971, S.R. Monteith, ANIC; 1 ♀, 15°03'S, 145°09'E, 3 km NE of Mt Webb, Malaise trap, 1-3.x.1980, J.C. Cardale, ANIC; 1 ♂, 15°04'S, 145°07'E, Mt Webb Nat. Pk, 27-30.iv.1981, ANIC; 1 ♂, 15°16'S, 144°59'E, 14 km W by N of Hope Vale Mission, 8-10.x.1980, J.C. Cardale, ANIC; 1 ♂, 15°17'S, 145°13'E, 1 km N of Rounded Hill, nr Hope Vale Mission, 8-10.x.1980, J.C. Cardale, ANIC; 1 ♂, Big Mitchell Ck, Mareeba-Mt Molloy Rd, 4.v.1967, D.H. Colless, ANIC; 1 ♀, Luster Ck, 8 km W by N of Mt Molloy, 21-22.v.1980, I.D. Naumann and J.C. Cardale, ANIC; 1 ♂, 1 ♀, Carr Ck, 18 km NNW of Mareeba, 21.v.1980, I.D. Naumann and J.C. Cardale, ANIC; 1 ♂, Kuranda, xii.1901, NHM; 1 ♂, 1 ♀, Kuranda, F.P. Dodd, QM; 1 ♂, 1.5 km SE of Kuranda, 15-17.v.1980, I.D. Naumann and J.C. Cardale, ANIC; 1 ♂, 4 ♀, Meringa, 21.vi.1925, 27.vi.1925, 5.vii.1925, 5.ix.1925, 14.ii.1927, A.N. Burns, MV; 2 ♀, Gordonvale, 26.vii.1923, W.C. Dorner, QDPI; 1 ♂, Evelyn, ex oil bath trap, 18.iv.1967, R.J. Elder, ANIC; 1 ♂, 17°41'S, 145°26'S, Millstream Falls Nat. Pk, 24-25.v.1980, I.D. Naumann and J.C. Cardale, ANIC; 1 ♂, Dunk I., viii.1927, H. Hacker, QM; 2 ♀, Dunk I., 25.viii.1927, UQIC; 1 ♀, 15 mi. (24 km) S of Ayr, 8.ix.1950, E.F. Riek, ANIC; 1 ♀, Skywindow Lookout, Eungella Nat. Pk, 8-9.v.1980, I.D. Naumann and J.C. Cardale, ANIC; 10 ♂, 7 ♀, Mackay, i.1893-xii.1900, ANIC, NHM, QM; 3 ♂, Mackay, 17.iii.1929, 21.iii.1930, A.N. Burns, MV; 1 ♀, Murchies Scrub, Watalgan Forest, 9 km off Rosedale Rd, 1.xii.1973, H. Frauca, ANIC; 1 ♂, Watalgan R. via Rosedale, 8.iv.1975, H. Frauca, ANIC; 1 ♀, Electra State Forest, c. 25 km S of Bundaberg, 1.xii.1976, H. Frauca, ANIC; 6 ♂, Balfour Ra., nr Benarkin, sweeping vegetation, rainforest margin, 2-3.iii.1974, I.D. Naumann, UQIC; 1 ♂, Deception Bay, 23.v.1940, E.M. Exley, UQIC; 1 ♂, Brisbane, 23.iv.1916, H. Hacker, QM; 1 ♀, Currumbin, 9.xii.1965, C. Speed, UQIC.

Results and Discussion

Among the specimens examined there are no differences in the length of the female propodeum or in the male genitalia (Figs 1-2). There are slight differences in the colour of wings but, in the paralectotypes at least, the darkness is due to dirt rather than pigmentation. For these reasons the use of formal subspecific taxa cannot be justified and the Australian material should be referred to as *Tiphia intrudens* Smith.

The fore wings show considerable variation, particularly in the structure of the second submarginal cell of the female (Figs 3-7). This variation is not geographical and varies between left and right wings from the same specimen.

Allen (1969) doubted that any species of Hymenoptera could range from India to Australia. Examples which contradict this statement include the formicid *Oecophylla smaragdina* Fabricius, which ranges from east Africa to Australia (Taylor and Brown 1985) and the pompilid *Pompilus cinereus* (Fabricius), which is widespread in the Old World (Day 1981). At least one other



Figs 1-7. (1) male genitalia, lateral; (2) male genitalia, dorsal; (3) right fore wing, female; (4-6) variation in second submarginal cells of right fore wing, females; (7) right fore wing, male. Scale line = 0.2 mm (Figs 1 and 2) and 1 mm (Figs 3-7).

Australian tiphid, *Rhagigaster fulvipennis* Turner, ranges from Queensland to Papua New Guinea, Aru Island and Indonesia (Brown unpublished).

Although *Tiphia intrudens* previously was recorded in Australia only from North Queensland (Turner 1908), it is now known to occur in the coastal and adjacent regions of northern and north-eastern Australia, from Darwin to Brisbane.

Acknowledgments

I wish to thank the curators of the above institutions for the loan of specimens in their care, Michael Day for helpful comments and Josephine Cardale for an initial list of references.

References

- ALLEN, H.W. 1969. Redescriptions of types of Tiphinae from Asia, Africa, Oceania in the British Museum (N.H.) and at Oxford University. *Transactions of the American entomological Society* **95**: 353-438.
- ALLEN, H.W. 1975. The genus *Tiphia* of the Indian subcontinent. *United States Department of Agriculture Technical Bulletin* **1509**: 1-96.
- ALLEN, H.W. and JAYNES, H.H. 1930. Contribution to the taxonomy of asiatic wasps of the genus *Tiphia* (Scoliidae). *Proceedings of the United States National Museum* **76**: 1-105.
- BINGHAM, C.T. 1897. *The fauna of British India including Ceylon and Burma*. Hymenoptera **I**: 56-64.
- DAY, M.C. 1981. A revision of *Pompilus* Fabricius (Hymenoptera: Pompilidae), with further nomenclatural and biological considerations. *Bulletin of the British Museum of natural History (Entomology)* **42**: 1-42.
- ILLINGWORTH, J.F. 1921. Natural enemies of sugar-cane beetles in Queensland. *Bureau of Sugar Experiment Stations Division of Entomology Bulletin* **13**: 1-47.
- SMITH, F. 1863. Catalogue of hymenopterous insects collected by Mr. A.R. Wallace in the islands of Mysol, Ceram, Waigiou, Bouru and Timor. *Journal and Proceedings of the Linnean Society of London, Zoology* **7**: 1-48.
- TAYLOR, R.W. and BROWN, D.R. 1985. Formicoidea. In Walton, D.W. (ed) *Zoological Catalogue of Australia*. Vol. 2. Hymenoptera: Formicoidea, Vespoidea, Sphecoidea. Pp. 1-149, AGPS, Canberra.
- TURNER, R.E. 1908. Remarks on the hymenopterous genus *Tiphia*. *Annals and Magazine of Natural History* (8) **2**: 116-131.